

IN THE CLAIMS

No amendment is made.

1-37. (Canceled)

38. (Original) A system for use in a heart having a first cardiac region and a second cardiac region, comprising:

a pulse circuit connected to a first electrode;

an amplifier circuit connected to a second electrode;

an autocapture system including an autocapture protocol adapted to prevent unintended cardiac depolarizations sensed at the second electrode due to pulses delivered by the pulse circuit through the first electrode when the first electrode is positioned in the first cardiac region and the second electrode is positioned in the second cardiac region; and

a depolarization circuit adapted to use the autocapture protocol to detect the unintended cardiac depolarizations, the depolarization circuit producing a signal indicating the detected depolarizations.

39. (Original) The system of claim 38, further comprising a pulse adjustment circuit, coupled to the pulse circuit, the pulse adjustment circuit adapted to modify a first value associated with the pulses delivered by the pulse circuit based on whether an occurrence of cardiac depolarization sensed at the second electrode is detected.

40. (Original) The system of claim 38, further comprising:

a first coupling capacitor, connected to the first electrode;

a second coupling capacitor, connected in series to the first coupling capacitor; and

a first switch, connected in parallel to the second coupling capacitor, to allow a selective employment of the second coupling capacitor.

41. (Original) The system of claim 40, wherein a first capacitance of the first coupling capacitor is greater than ten microfarads, and a second capacitance of the second coupling capacitor is less than five microfarads.

42. (Original) The system of claim 41, further comprising a pulse adjustment circuit, coupled to the pulse circuit, the pulse adjustment circuit adapted to modify a first value associated with the pulses delivered by the pulse circuit based on whether an occurrence of cardiac depolarization sensed at the second electrode is detected.

43. (Original) A system for use in a heart having a first cardiac region and a second cardiac region, comprising:

- a pulse circuit coupled to a first electrode;
- a sense amplifier circuit having an input and an output, the input coupled to one of the first electrode and a second electrode through a first switch; and
- a depolarization circuit coupled to the output of the sense amplifier circuit, the depolarization circuit adapted to detect cardiac depolarizations sensed at one of the first and second electrodes due to pulses delivered by the pulse circuit through the first electrode when the first electrode is positioned in the first cardiac region and the second electrode is positioned in the second cardiac region, the depolarization circuit producing a signal indicating the detected depolarizations.

44. (Original) The system of claim 43, further comprising a pulse adjustment circuit, coupled to the pulse circuit, the pulse adjustment circuit adapted to modify a first value associated with the pulses delivered by the pulse circuit based on whether an occurrence of cardiac depolarization sensed at the second electrode is detected.

45. (Original) The system of claim 43, wherein the pulse circuit comprises:

- a first coupling capacitor, connected to the first electrode;
- a second coupling capacitor, connected in series to the first coupling capacitor; and
- a first switch, connected in parallel to the second coupling capacitor, to allow a selective employment of the second coupling capacitor.

46. (Original) The system of claim 45, wherein a first capacitance of the first coupling capacitor is greater than ten microfarads, and a second capacitance of the second coupling capacitor is less than five microfarads.

47. (Original) The system of claim 46, further comprising a pulse adjustment circuit, coupled to the pulse circuit, the pulse adjustment circuit adapted to modify a first value associated with the pulses delivered by the pulse circuit based on whether an occurrence of cardiac depolarization sensed at the second electrode is detected.

48. (Original) A method, comprising:

- delivering electrical pulses at a first value to a first cardiac region; and
- using an autocapture protocol to detect cardiac depolarizations sensed in a second cardiac region due to the electrical pulses delivered to the first cardiac region, the autocapture protocol adapted to prevent unintended depolarization of the second cardiac region due to the electrical pulses delivered to the first cardiac region.

49. (Original) The method of claim 48, further comprising modifying the first value based on whether the cardiac depolarization in the second cardiac region is detected.

50. (Original) The method of claim 49, wherein the first cardiac region is an atrial region, and the second cardiac region is a ventricular region.

51. (Original) The method of claim 49, wherein the first cardiac region is a ventricular region, and the second cardiac region is an atrial region.

52. (Original) The method of claim 49, wherein modifying the first value includes increasing the first value by a first amount when the cardiac depolarization in the second cardiac region is not detected.

53. (Original) The method of claim 52, wherein the first value is a first pulse width value.

54. (Original) The method of claim 52, wherein the first value is a first voltage value.

55. (Original) The method of claim 52, wherein increasing the first value includes increasing the first value by a first percentage of the first voltage value.

56. (Original) The method of claim 54, wherein increasing the first value includes increasing the first value by approximately two tenths (0.2) volts.

57. (Original) The method of claim 49, wherein modifying the first value includes modifying the first value until a second cardiac region pacing threshold is reached, the second cardiac region pacing threshold being the first value required to capture the second cardiac region.

58. (Original) The method of claim 57, further comprising using the autocapture protocol to detect cardiac depolarizations sensed in the first cardiac region due to the electrical pulses delivered to the first cardiac region.

59. (Original) The method of claim 58, further comprising modifying the first value based on whether the cardiac depolarization in the first cardiac region is detected.

60. (Original) The method of claim 59, wherein modifying the first value includes modifying the first value until a first cardiac region pacing threshold is reached, the first cardiac region pacing threshold being the first value required to capture the first cardiac region.

61. (Original) The method of claim 60, further including:

setting the first value based on the first and second cardiac region pacing thresholds.